Attachment C

Material Safety Data Sheets (MSDSs)

CDM

JRW BIOREMEDIATION LLC

MSDS - Whey Powder
Issued January 19, 2007

Section 1. Product Information
Name: Whey Powder
Material Use: Food stuff

JRW Bioremediation, LLC
24 Emergency Telephone 913-438-5544

Section 2. Hazardous Ingredients
Not applicable

Section 3. Physical Data
Physical State: Solid
Vapor Pressure (mm Ag): Not applicable
Boiling Point: Not applicable
Odor & Appearance: Typical of Whey Powder
Vapor Density (air=1): Not applicable
Freezing Point: 0oC
Density: Approx. 775 g/l
Evaporation Rate: Not applicable
Solubility in Water: Soluble

Section 4. Fire and Explosion Hazard
Non Flammable
Means of Extinction: Foam, CO2, Dry chemicals or water
Flash Point: Not less than 250oC
Explosion Data: Not applicable

Section 5. Reactivity Data
Chemical Stability: Product is stable
Reactivity: Not applicable

Section 6. Toxicological Properties
Routes of Entry: Ingestion, Inhalation, Skin, Eyes
Effects of Acute Exposure to Product (Allergen):
This product contains lactose, as such those who are lactose intolerant may experience some discomfort and some digestive problems associated with this conditions; acuteness

Tel: 913-438-5544 • Fax: 913-438-5554 • 14321 West 96th Terrace, Lenexa, KS 66215
info@jrwbiorem.com • http://www.jrwbioremediation.com

JRW BIOREMEDIATION LLC

of discomfort or problem varies with each individual. In addition, those who are allergic to milk proteins should be cautioned, as this product is a potential allergen due to presence of milk proteins.
Inhalation: Dust irritation, respiratory ailments may be aggravated by dust (allergen)
Skin Contact: Dust irritation
Eye Contact: Dust irritation

Effects of Chronic Exposure to Product
No evidence of adverse effect from available information

LD50: Unknown
LC50: Unknown
Irritancy of product:
Sensitization of Product: None

Section 7. Preventive Measures
Personal Protective Equipment
As recommended by the Good Manufacturing Practices of the user.
Gloves: PVC or rubber
Clothing: Good manufacturing practices
Respiratory: Dust mask
Eye: Safety glasses
Footwear: Safety shoes
Engineering Controls: Not applicable

Leak and Spill Procedures
Sweep up or shovel up and dispose of in a suitable container. Clean area with detergent and rinse.
Waste Disposal: In accordance with local, provincial, state and federal regulations
Handling Procedures & Equipment: Not applicable.
Storage Requirements: Keep away from heat source, store in cool storage (20oC/68oF) with a relative humidity of less than 50%. Avoid storing near strong smelling products.

Section 8. First Aid Measures
Skin: Wash with soap and water and rinse with water
Eye: Rinse with water, see physician if necessary
Inhalation: Not applicable
Ingestion: Do not provoke vomiting. See physician if necessary

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MSDS Number: **S4226** * * * * * *Effective Date:* ***05/06/05*** * * * * * *Supercedes:* ***04/15/02***

MSDS **Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.
222 Red School Lane
Phillipsburg, NJ 08865

J.T.Baker®

24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300
National Response in Canada
CANUTEC: 613-996-6666
Outside U.S. And Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance

Sodium Lactate (60% Syrup)

1. Product Identification

Synonyms: Lacolin; Lactic Acid, monosodium Salt; Propanioc acid, 2-hydroxy-, monosodium salt
CAS No.: 72-17-3
Molecular Weight: 112.07
Chemical Formula: C3H5O3Na
Product Codes: 2096, V034

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Sodium Lactate	72-17-3	60%	Yes
Water	7732-18-5	40%	No

3. Hazards Identification

Emergency Overview

CAUTION! MAY CAUSE EYE IRRITATION.

J.T. Baker SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight
Flammability Rating: 0 - None
Reactivity Rating: 0 - None
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT
Storage Color Code: Orange (General Storage)

Potential Health Effects

To the best of our knowledge, the toxicological properties of this material have not been thoroughly investigated.

Inhalation:
No adverse health effects expected from inhalation.
Ingestion:
Not expected to be a health hazard via ingestion.
Skin Contact:
Not expected to be a health hazard from skin exposure.
Eye Contact:
May cause mild irritation, possible reddening.
Chronic Exposure:
No information found.
Aggravation of Pre-existing Conditions:
No information found.

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4. First Aid Measures

Inhalation:
Not expected to require first aid measures. Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion:
Not expected to require first aid measures. If large amounts were swallowed, give water to drink and get medical advice.
Skin Contact:
Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

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5. Fire Fighting Measures

Fire:
Not considered to be a fire hazard.
Explosion:
Not considered to be an explosion hazard.
Fire Extinguishing Media:
Use any means suitable for extinguishing surrounding fire.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Avoid long storage times. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.
Personal Respirators (NIOSH Approved):
For conditions of use where exposure to the substance is apparent and engineering controls are not feasble, consult an industrial hygienist. For emergencies, or instances where the

exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection:
Wear protective gloves and clean body-covering clothing.
Eye Protection:
Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:
Colorless to yellow liquid.
Odor:
Odorless.
Solubility:
Complete (100%)
Specific Gravity:
1.31
pH:
6.5 - 8.5
% Volatiles by volume @ 21C (70F):
No information found.
Boiling Point:
110C (230F)
Melting Point:
17C (63F)
Vapor Density (Air=1):
0.7
Vapor Pressure (mm Hg):
14 @ 20C (68F)
Evaporation Rate (BuAc=1):
No information found.

10. Stability and Reactivity

Stability:
Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:
Carbon dioxide and carbon monoxide may form when heated to decomposition.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
No information found.
Conditions to Avoid:
None.

11. Toxicological Information

Oral rat LD50: 2000 mg/Kg. Irritation Data for Sodium Lactate: (Std Draize, rabbit, eye): 100 mg - mild.

--------\Cancer Lists\----------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Sodium Lactate (72-17-3)	No	No	None
Water (7732-18-5)	No	No	None

12. Ecological Information

Environmental Fate:
Mobility: Completely soluble.
Persistence / degradability: Product is a salt of lactic acid, which is readily biodegradable.
Bioaccumulation: Unlikely.
Ecotoxicity: Ecological injuries are not known or expected under normal use; (No effect on Daphnia @ 10g/L).
Environmental Toxicity:
No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

--------\Chemical Inventory Status - Part 1\----------

Ingredient	TSCA	EC	Japan	Australia
Sodium Lactate (72-17-3)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\--------

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Sodium Lactate (72-17-3)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\--------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Sodium Lactate (72-17-3)	No	No	No	No
Water (7732-18-5)	No	No	No	No

--------\Federal, State & International Regulations - Part 2\--------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Sodium Lactate (72-17-3)	No	No	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
Reactivity: No (Mixture / Liquid)

Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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16. Other Information

NFPA Ratings: Health: **1** Flammability: **0** Reactivity: **0**
Label Hazard Warning:
CAUTION! MAY CAUSE EYE IRRITATION.
Label Precautions:
Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.
Label First Aid:
In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes.
Get medical attention if irritation develops or persists.
Product Use:
Laboratory Reagent.
Revision Information:

No Changes.

Disclaimer:

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Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)

Remediation and Natural Attenuation Services Incorporated
6712 West River Road
Brooklyn Center, MN 55430

Product Information: 763-585-6191 Issue Date: March 28, 2002

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Section 1: IDENTIFICATION

1.1 Product Name: Newman Zone
1.2 Product Type: Inedible Industrial Nutrient for Microbial Organisms
1.3 Hazard Rating: Health: 1 Fire: 1 Reactivity: 1
1.4 Formula: Proprietary

Substances Subject to SARA 313 Reporting Are Indicated by "#"

It is our opinion that the above named product does not meet the definition of "hazardous Chemical" as defined in the OSHA "Hazard Communication Standard" regulation 29 CFR 1910.1200. This material Safety Data Sheet is provided as general information for health and safety guidelines.

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Section 2: INGREDIENTS/COMPOSITION

	CAS No.	%	PEL (mg/m^3)	TWA (mg/m^3)
Soybean Oil (food grade)	8001-22-7	45	15(Mist)	10(Mist)
Sodium-L-Lactate	867-56-1	4		
Food Additives/Emulsifiers/Preservatives	(Proprietary)	<10		
Water		<45		

EMERGENCY ONLY, 24-HOUR SERVICE: CHEMTREC: 1-800-424-9300

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Section 3: PHYSICAL AND CHEMICAL CHARACTERISTICS

This section completed per formulation ingredient data unless stated.

- Solubility: Dispersible in water (product)
- PH: 6 (product)
- Specific Gravity: 0.98 (product)
- Boiling Point: NA
- Vapor Pressure: NA
- Vapor Density: NA
- Percent Volatile By Volume (%): NA
- Evaporation Rate: NA
- Viscosity: 23.6 cps @ 68°F (Brookfield)(product)
- Product Appearance and Odor: Light yellow-cream colored liquid, vegetable oil odor.

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Section 4: FIRE AND EXPLOSION HAZARDS

This section completed per formulation ingredient data unless stated.

4.1 Special Fire Hazards: Product - none, does not support combustion.

Flash Point: >540 degrees F (Pure Soybean Oil Closed Cup).
Flammable Limits
LEL ND
UEL ND

4.2 Fire Fighting Methods: Use method appropriate for surrounding fire.

4.3 Extinguishing Media: Dry Chemical or CO_2 Preferable; water may cause spattering or spreading.

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Section 5: HEALTH HAZARD DATA

5.1 THIS PRODUCT IS NEITHER INTENDED NOR MANUFACTURED FOR HUMAN OR ANIMAL CONSUMPTION AND SHOULD NOT BE USED FOR FOOD OR FEEDSTUFFS.

5.2 Effects of Overexposure: NA

5.3 Emergency and First Aid Procedures: If inhaled, remove from contaminated atmosphere. For eye contact immediately flush eyes with large amounts of water. Ensure rinsing entire surface of eye & under lid. For skin contact wash affected areas thoroughly with soap and water. Seek medical help for persistent irritation.

5.4 Hydrolyzed soy protein has been identified by the United States Food and Drug Administration as a food allergen. Symptoms include swelling of the lips, stomach cramps, vomiting, diarrhea, skin hives, rashes, eczema and breathing problems.

5.5 Occupational Exposure Limits [8-hour time weighted averages (TWA)]:

	CAS No.	mg/m^3 OSHA PEL/ACGIH TLV
Soybean Oil (food grade)	8001-22-7	15(Mist)/10(Mist)

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Section 6: REACTIVITY DATA

This section completed per formulation ingredient data unless stated.

6.1 Stability: Stable under normal conditions.

6.2 Conditions to Avoid: NA

6.3 Incompatibilities: None known

6.4 Hazardous Decomposition Products: Product - None identified. Ingredients - Carbon oxides. Biological decomposition (spoilage) may result in offensive odors.

6.5 Hazardous Polymerization; None known

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Section 7: SPILL OR LEAK PROCEDURES

This section completed per formulation ingredient data unless stated.

7.1 Spill Response: Water dispersible. Same as for vegetable oil spills: isolate spill, prevent from entering waterways, and sewer systems. Sorb or remove spilled materials as soon as possible. Oils and specific quantities of oils may be reportable under federal, state, or local regulations.

7.2 Waste Disposal Method: This product is not hazardous, however, wastes must be disposed in accordance with local, state or federal regulations. Consult with local sewer authority, or solid waste facility prior to disposition.

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Section 8: SPECIAL PRECAUTIONS

No protective equipment is necessary under normal use conditions.

8.1 Eyes: If splashing may occur, eye protection recommended.
8.3 Skin: Wear impervious gloves for prolonged or repeated exposure.
8.4 Respiratory: Avoid breathing mists of this product

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Section 9: TRANSPORTATION PRECAUTIONS

This section completed per formulation ingredient data unless stated.

9.1 Transportation Considerations: This product is not classified as dangerous in the meaning of transport regulations. Shippers and transporters may need to meet packaging and transportation requirements for certain oils and respective quantities under CFR 49 Part 130.

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.

Material Safety Data Sheet

Shaw Environmental, Inc.

17 PRINCESS ROAD
LAWRENCEVILLE, N.J. 08648
(609) 895-5340

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

Material Name: DHC microbial consortium (SDC-9) MSDS #: ENV 1033

Date Prepared: 10/06/2003 CAS #: N/A (Not Applicable)

Prepared By: Simon Vainberg Formula #: N/A

Material Description: Non-hazardous, naturally occurring non-altered anaerobic microbes and enzymes in a water-based medium.

SECTION 2 - INGREDIENTS

Components	%	OSHA PEL	ACGIH TLV	OTHER LIMITS
Non-Hazardous Ingredients	100	N/A	N/A	N/A

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 100°C (water) Specific Gravity (H_2O = 1): 0.9 - 1.1

Vapor Pressure @ 25°C: 24 mm Hg (water) Melting Point: 0°C (water)

Vapor Density: N/A Evaporation Rate (H_2O = 1): 0.9 - 1.1

Solubility in Water: Soluble Water Reactive: No

pH: 6.0 - 8.0

Appearance and Odor: Murky, yellow water. Musty odor.

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A

Flammable Limits: N/A

Extinguishing Media: Foam, carbon dioxide, water

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

SECTION 5 - REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None

Incompatibility (Materials to Avoid): Water-reactive materials

Hazardous Decomposition Byproducts: None

SECTION 6 - HEALTH HAZARD DATA

HEALTH EFFECTS

The effects of exposure to this material have not been determined. Safe handling of this material on a long-term basis will avoid any possible effect from repetitive acute exposures. Below are possible health effects based on information from similar materials. Individuals hyper allergic to enzymes or other related proteins should not handle.

Ingestion: Ingestion of large quantities may result in abdominal discomfort including nausea, vomiting, cramps, diarrhea, and fever.

Inhalation: Hypersensitive individuals may experience breathing difficulties after inhalation of aerosols.

Skin Absorption: N/A

Skin Contact: May cause skin irritation. Hypersensitive individuals may experience allergic reactions to enzymes.

Eye Contact: May cause eye irritation.

FIRST AID

Ingestion: Get medical attention if allergic symptoms develop (observe for 48 hours). Never give anything by mouth to an unconscious or convulsing person.

Inhalation: Get medical attention if allergic symptoms develop.

Skin Absorption: N/A

Skin Contact: Wash affected area with soap and water. Get medical attention if allergic symptoms develop.

Eye Contact: Flush eyes with plenty of water for at least 15 minutes using an eyewash fountain, if available. Get medical attention if irritation occurs.

NOTE TO PHYSICIANS: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this material may have occurred.

SECTION 7 - SPILL AND LEAK PROCEDURES

Reportable quantities (in lbs of EPA Hazardous Substances): N/A

Steps to be taken in case of spill or release: No emergency results from spillage. However, spills should be cleaned up promptly. All personnel involved in the cleanup must wear protective clothing and avoid skin contact. Absorb spilled material or vacuum into a container. After clean-up, disinfect all cleaning materials and storage containers that come in contact with the spilled liquid.

Waste Disposal Method: No special disposal methods are required. The material may be sewered, and is compatible with all known biological treatment methods. To reduce odors and permanently inactivate microorganisms, mix 100 parts (by volume) of DHC consortium with 1 part (by volume) of bleach. Dispose of in accordance with local, state and federal regulations.

SECTION 8 - HANDLING AND STORAGE

Hand Protection: Rubber gloves.

Eye Protection: Safety goggles with side splash shields.

Protective Clothing: Use adequate clothing to prevent skin contact.

Respiratory Protection: Surgical mask.

Ventilation: Provide adequate ventilation to remove odors.

Storage & Handling:
Material may be stored for up to 3 weeks at 2-4°C without aeration.

Other Precautions: An eyewash station in the work area is recommended.

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KB-1™ Dechlorinator Material Safety Data Sheet

Section 1: Material Identification

Trade Name: KB-1™ Dechlorinator
Chemical Family: bacterial mixture
Chemical name: No IUC name for mixture is known to exist
Manufacturer/Supplier: SiREM
130 Research Lane, Suite 2,
Guelph, Ontario,
Canada N1G 5G3

For Information call: 519-822-2265 / 1-866-251-1747
Emergency Number: 519-822-2265
Description: Microbial inoculum (non-pathogenic, non-hazardous)
Trade Name: KB-1™ Dechlorinator
Product Use: Bioremediation of contaminated groundwater.
Date Prepared: 2 February 2005

Section 2: Composition, Information on Ingredients

KB-1™ Dechlorinator is a microbial culture grown in an aqueous dilute mineral salt solution media containing no hazardous ingredients.

The microbial composition of KB-1™ Dechlorinator (as determined by phylogenetic analysis) is listed in Table 1. Identification of organisms was obtained by matching 16S rRNA gene sequence of organisms in KB-1™ Dechlorinator to other known organisms. The characteristics of related organisms can be used to identify potential or likely characteristics of organisms in KB-1™ Dechlorinator.

Table 1. Genus' identified in KB-1™ Dechlorinator Microbial Inoculum

Genus
Dehalococcoides sp.
Geobacter sp.
Methanomethylovorans sp.

Section 3: Hazards Identification:

A review of the available data does not indicate any known health effects related to normal use of this product.

Section 4: First Aid Measures:

Avoid direct contact with skin and eyes. In any case of any exposure which elicits a response, a physician should be consulted immediately.

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Eye Contact: Flush eyes with water for at least 15 minutes, occasionally lift upper and lower eyelids, if undue irritation or redness occurs seek medical attention.

Skin Contact: Remove contaminated clothing and wash skin thoroughly with water and antibacterial soap. Seek medical attention if irritation develops or open wounds are present.

Ingestion: Do not induce vomiting, drink several cups of water, seek medical attention.

Inhalation: Remove to fresh air. If not breathing give artificial respiration. In case of labored breathing give oxygen. Call a physician.

Section 5 - Fire Fighting Measures:

Non-flammable
Flash Point: not applicable
Upper flammable limit: not applicable
Lower flammable limit: not applicable

Section 6 – Accidental Release Procedures

Spilled KB-1™ Dechlorinator should be soaked up with sorbant and saturated with a 10% bleach solution (prepared by making a one in ten dilution of diluted standard bleach [normally sold at a strength of 5.25% sodium hypochlorite] to disinfect affected surfaces. Sorbant should be double bagged and disposed of as indicated in section 12. After removal of sorbant, area should be washed with 10% bleach solution to disinfect. If liquid from the culture vessel is present on the fittings, non-designated tubing or exterior of the stainless steel pressure vessel liquid should be wiped off and the area washed with 10% bleach solution.

Section 7 - Handling and Storage

KB-1™ Dechlorinator is shipped in stainless steel pressure vessels and connected to injection lines and inert gas is used to pressurize the vessel to displace the contents. KB-1™ Dechlorinator should be handled with care to avoid any spillage. Vessels are shipped with 1 pound per square inch (psi) pressure; valves should not be opened until connections to appropriate lines for subsurface injection are in place.

Storage Requirements: Avoid exposing stainless steel pressure vessels to undue temperature extremes (i.e., temperatures less than 0°C or greater than 30°C may result in harm to the microbial cultures and damage to the vessels). All valves should be in the closed position when the vessel is not pressurized to prevent the escape of gases and to maintain anaerobic conditions in the vessel. Avoid exposure of the culture to air as the presence of oxygen will kill dechlorinating microorganisms.

Section 8 - Exposure Controls/Personal Protection

Personal protective equipment:

Skin: Protective gloves (latex, vinyl or nitrile) should be worn.
Eye Protection: Wear appropriate protective eyeglasses or goggles when opening pressure vessels valves or when pressurizing vessels to inject contents into the subsurface.
Respiratory: No respiratory protection is required.
Engineering Controls: Good general room ventilation is expected to be adequate.

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Site Recovery & Management

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Section 9: Physical and Chemical Properties:

Physical State: liquid
Odour: skunky odour
Appearance: dark grey, slightly turbid liquid under anaerobic conditions, pink if exposed to air (oxygen).
Specific gravity: not determined
Vapor pressure: not applicable
Vapor density: not applicable
Evaporation rate: not determined
Boiling point: ~100° C
Freezing point/melting point: ~ 0°C
pH: 6.5-7.5
Solubility: fully soluble in water

Section 10 – Stability and Reactivity Data

Stable and non-reactive.
Maintain under anaerobic conditions to preserve product integrity.
Materials to avoid: none known

Section 11 - Toxicological Information

Potential for Pathogenicity:

KB-1™ Dechlorinator has tested negative (i.e., the organisms are not present) for a variety of pathogenic organisms listed in Table 2. While there is no evidence that virulent pathogenic organisms are present in KB-1™ Dechlorinator, there is potential that certain organisms in KB-1™ Dechlorinator may have the potential to act as opportunistic (mild) pathogens, particularly in individuals with open wounds and/or compromised immune systems. For this reason standard hygienic procedures such as hand washing after use should be observed.

Table 2, Results of Human Pathogen Screening of KB-1™ Dechlorinator

Organism	**Disease(s) Caused**	***Test result***
Salmonella sp.	Typhoid fever, gastroenteritis	Not Detected
Listeria monocytogenes	Listerioses	Not Detected
Vibrio sp.,	Cholera, gastroenteritis	Not Detected
Campylobacter sp.,	Bacterial diarrhea	Not Detected
Clostridia sp.,	Food poisoning, Botulism, tetanus, gas gangrene	Not Detected
Bacillus anthracis	Anthrax	Not Detected
Pseudomonas aeruginosa	Wound infection	Not Detected
Yersinia sp.,	Bubonic Plague, intestinal infection	Not Detected
Yeast and Mold	Candidiasis, Yeast infection etc.	Not Detected
Fecal coliforms	Indicator organisms for many human pathogens diarrhea, urinary tract infections	Not Detected
Enterococci	Various opportunistic infections	Not Detected

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Section 12. Disposal Considerations

Material must be disinfected or sterilized prior to disposal. Consult local regulations prior to disposal.

Section 13 – Transport Information

Non-hazardous, non-pathogenic microbial inoculum – Biosafety Risk Group 1.

Chemicals, Not Otherwise Indexed (NOI), Non-hazardous

Not subject to TDG or DOT guidelines.

Disclaimer:

The information provided on the MSDS sheet is based on current data and represents our opinion based on the current standard of practice as to the proper use and handling of this product under normal, reasonably foreseeable conditions.

Last revised: 3 February 2005